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UTILIZING CLASSROOM APPLICATION OF FACIAL RECOGNITION TECHNIQUES THROUGH INTERNET OF THINGS (IOT) DEVICES

Ahmad Airuddin (a), Norreha Othman (b) and Ainul Maulid Ahmad (c)
airuddin@uptm.edu.my, norreha@uptm.edu.my, ainulmaulid@unishams.edu.my
Universiti Poly-Tech Malaysia, Malaysia
Universiti Islam Antarabangsa Sultan Abdul Halim Mu'adzam Shah, Kedah,

ABSTRACT

In the contemporary era, technology has become an indispensable component of our daily lives, augmenting our existence in manifold ways. Notably, face recognition and Internet of Things (IoT) have undergone significant advancements in performance over the last few years. This phenomenon can be attributed to two factors namely, optimization of cost and time in the classroom, while simultaneously ensuring accuracy in attendance, and the ability to connect with electrical equipment automatically. The current study proposes an automatic smart classroom application that utilizes the concepts of IoT and face recognition. Specifically, the application relies entirely on face detection and recognition to automatically detect the presence of students in the classroom and mark their attendance. Moreover, the application also provides advanced technology that enables automatic switching on of electrical power, including but not limited to lamps, fans, LCDs, and air conditioning systems. This feature not only reduces energy consumption but also allows for monitoring of units consumed. The proposed solution represents a significant step towards establishing a smart classroom. Results and analysis of the IoT solution demonstrate that it accelerates the availability process in the classroom without requiring human intervention.

Keywords: Classroom Application , IoT, Face Recognition

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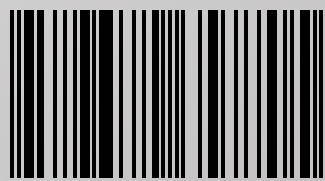## INTERNATIONAL CONFERENCE ON CROSS-DISCIPLINARY ACADEMIC RESEARCH 2023

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